



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/802,519	03/09/2001	Chang-Meng Hsiung	185641-007810US	9219

20350 7590 03/30/2004

TOWNSEND AND TOWNSEND AND CREW, LLP
TWO EMBARCADERO CENTER
EIGHTH FLOOR
SAN FRANCISCO, CA 94111-3834

EXAMINER

KASENGE, CHARLES R

ART UNIT	PAPER NUMBER
----------	--------------

2125

1H

DATE MAILED: 03/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/802,519

Applicant(s)

HSIUNG ET AL.

Examiner

Charles R Kasenge

Art Unit

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-25 and 27-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23-25 and 27-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 23-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hales et al. U.S. Patent 6,112,126 in view of Rollender et al. U.S. Patent 5,971,282. Referring to claims 23, 24, 25, and 38, Hales discloses a method for monitoring a process, the method comprising: storing a first model in a memory (col. 9, lines 38-50); acquiring data from a process (col. 5, lines 46-53); applying the first model to the data to identify a first predicted descriptor characteristic of a state of the process (col. 3, lines 26-37); and consulting a first knowledge based system to provide an output based upon the first predicted descriptor (col. 7, lines 51-67). Hales discloses the method of claim 23 wherein the model is constructed from a mathematical equation describing a physical law (col. 11, lines 52-67). Hales discloses the method of claim 23 further comprising preprocessing the data prior to applying the model (col. 8, lines 7-17). Hales discloses the construction of multiple models influenced by previous models (col. 15, lines 35-44)

Referring to claims 27 and 28, Hales discloses the method of claim 23 wherein the output is communicated to a human operator to permit monitoring of the process (col. 9, lines 25-37). Hales discloses the method of claim 23 wherein the output is resident on a server and accessible to a user through a browser software program (col. 20, lines 31-46).

Referring to claims 29, 30, 31, 32, and 41, Hales discloses the methods of claims 23 and 28 wherein the input is acquired from the process over a network of computers (col. 7, lines 42-55). Hales discloses the method of claim 23 wherein the output is communicated over a network to an associated system, the associated system including at least one of a legacy system, an e-enterprise system, and a desktop application (col. 9, lines 25-37). Hales discloses the method of claim 23 wherein the first knowledge based system is an expert system (col. 6 and 7, lines 66-67 and 1-22).

Referring to claims 33, Hales discloses the method of claim 23 further comprising: acquiring initial data from a source at a first time; converting the initial data into electronic form (col. 3, lines 1-4); loading the initial data into memory; retrieving the initial data from memory; acquiring subsequent data from the source at a second time; assigning a first descriptor to the initial data and a second descriptor to the subsequent data; constructing the model based upon the initial data, the subsequent data, the first descriptor, and the second descriptor; and storing the model in memory (col. 18, lines 3-26).

Referring to claims 34, 35, 36, and 37, Hales discloses the method of claim 33 wherein the model is constructed from one of a univariate statistical technique, a multivariate statistical technique (col. 9, lines 8-20), a neural-based approach, and a time series analysis (col. 7, lines 23-41). Hales discloses the method of claim 33 wherein the model is constructed from one of a group of different algorithms stored in a library (col. 3, lines 42-50). Hales discloses the method of claim 33 wherein the source is in communication with the process, the initial data and the subsequent data reflecting prior operation of the process (col. 12, lines 5-22).

Referring to claims 39 and 40, Hales discloses a method of claim 38 wherein the second model is constructed based upon the initial data, the subsequent data, the first descriptor, and the second descriptor, such that comparison of the first descriptor and the second descriptor represents a cross-validation (col. 15, lines 35-44). Hales discloses the method of claim 38 wherein the second model is constructed from operation of a second process similar to the process, such that comparison of the first descriptor to the second descriptor represents an external validation (col. 15, lines 35-44).

Referring to claims 42 and 43, Hales discloses the method of claim 38 wherein a difference between the first predicted descriptor and the second predicted descriptor is resolved by a second expert system (col. 18, lines 44-64). Hales discloses the method claim 23 further comprising receiving key preliminary information and communicating the key preliminary information downstream to the first model, such that the first predicted descriptor reflects the key preliminary information (col. 8, lines 7-17).

Hales does not expressly disclose specifically monitoring an environmental condition by acquiring data with a chemical sensor, biological sensor, or a radiation sensor. However, Rollender discloses monitoring an environmental condition (col. 2, lines 46-52) by acquiring data with a chemical sensor, biological sensor, or a radiation sensor (col. 9, lines 17-21).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use Hales' process control optimization system for Rollender's environmental condition monitoring system. One of ordinary skill in the art would have been motivated to do this since Hales' system is for optimizing systems that require data via sensors (col. 5, lines 46-58).

Conclusion

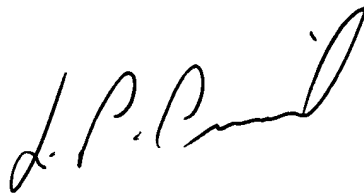
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles R Kasenge whose telephone number is 703 305-8592.

The examiner can normally be reached on Monday through Friday, 8:30 - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on 703 308-0538. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

March 16, 2004
CK



**LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100**